

Livy and Zack are writing arithmetic sequences. The first three terms of Livy's sequence are shown below.

4, 7, 10, . . .

- a. What is the common difference for Livy's sequence? Show or explain how you got your answer.
- b. Write an expression that can be used to find the *n*th term of Livy's sequence.

The *n*th term of Zack's sequence is three times the *n*th term of Livy's sequence.

- c. What is the 5th term of Zack's sequence? Show or explain how you got your answer.
- d. Write an expression that represents the difference of the *n*th term of Zack's sequence and the *n*th term of Livy's sequence.